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Agriculture and the Transition to the Market

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The costs of food in Central and Eastern Europe during today's political and economic transition are quite high. Reducing these costs will be a difficult task involving restructuring farms and fostering competition in processing and distribution.

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This paper — a product of the Agricultural Policies Division, Agriculture and Rural Development Department — is part of a larger effort in PRE to address issues related to the economic transition in Eastern and Central Europe. Copies are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Cicely Spooner, room N8-037, extension 30464 (25 pages).

Agricultural sectors in Eastern and Central Europe are large so that changes in producer prices, farm employment, and land ownership affect substantial numbers of people.

In the past, food in the regic was highly politicized. For decades, governments of Eastern European countries and the USSR offered their citizens stable, subsidized food prices and a steadily improving diet in an effort to demonstrate the superiority of communism over capitalism.

During the transition, the context has changed, but food remains politicized. Many consumers in the region are ill-prepared to pay the real costs of food, which are quite high. The task of reducing those costs will be difficult, involving restructuring of farms and fostering competition in processing and distribution.

Management of the agricultural transition in Eastern and Central Europe will affect the political sustainability of the process and influence agriculture's contribution to the growth of emerging market economies.

Technological considerations argue in favor of rapid restructuring and sale of farms. The new owners might choose to manage their lands jointly, and the restructured farm might look from the road much like its predecessor, but managerial and financial responsibility would be quite different.

Although the agricultural sector of all Eastern and Central Europe is large, Soviet agriculture dwarfs it in its impact on the region and the world. A positive program to stop the decline in Soviet agriculture could contribute to economic growth and political stability in the region and in the world. Failure to remedy the fundamental flaws in Soviet agriculture will speed the country's slide into poverty and ethnic turmoil — and undermine the efforts of Central and Eastern Europeans to succeed.

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Agriculture and the Transition to the Market*

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AGRICULTURE AND THE TRANSITION TO THE MARKET

INTRODUCTION

1. Agriculture presents some of the most challenging dilemmas of the transition to a market economy. Agricultural sectors in Eastern and Central Europe are large, and the number of people directly affected by changes in producer prices, farm employment, and land ownership is substantial. Retail food markets are among the most distorted in the pre-transition economies, and the needed adjustments are correspondingly large. Even at subsidized prices, food absorbs a high share of consumer expenditures, and changes in food prices significantly reduce real income.

2. Food, moreover, is highly politicized. Citizens of Eastern Europe and the USSR were for decades offered stable, subsidized food prices and a steadily improving diet as an indicator of the superiority of communism over capitalism, and compensation for deficiencies in other aspects of material life. Past efforts to raise prices of meat and bread without improving other dimensions of material life or increasing political freedoms were perceived to violate one of the fundamental tenets of the post-Stalinist social contract, and were rejected. It is paradoxical that food assumed this political importance, since the economic organization of agriculture in socialist economies is particularly ill-suited for production of cheap food.

3. During the transition, the context has changed entirely, but food remains, nonetheless, political. A mythology has grown up around the issue of retail food prices in socialist countries. The mythology obscures the real prices that consumers have paid in the past, and that most are paying now. Nonetheless, many consumers are ill prepared to face the real costs of food which, at present, are quite high. The task of reducing those costs is a lengthy one involving restructuring of farms and creation of competition in processing and distribution. The different time paths of adjustments on the demand and supply sides constitute a central dilemma of the agricultural adjustment.

4. Property rights in land present another very sensitive political and ideological issue. Each of these has distributional implications for society as a whole, and each bears directly on the efficiency of the agricultural sector during and after the transition. The skill with which agriculture is managed in the coming months will affect the sustainability of the economic transition more generally.

Agroclimatic Diversity

5. The countries of Eastern and Central Europe comprise a large and diverse agricultural region even if the Soviet Union is excluded. In the northern tier, in Poland, the Czech and Slovak Federal Republic, and the former GDR grains (except for maize), roots, and specialty crops dominate the field crops, and imports augment domestic production of feed to sustain a large livestock industry. In Hungary, Romania, and northern Yugoslavia moisture and warmth are adequate for maize and oilseeds, and mixed grain/livestock farming predominates. Farther south in Yugoslavia and Bulgaria irrigation becomes more important, as do viticulture, orchards, and tobacco production. If the Soviet Union is included, the agroclimatic range of Eastern and Central Europe is replicated, and augmented by the largest area of irrigated agriculture in the world, in Soviet Central Asia.

Initial Conditions: Characteristics of the Sector Before the Transition

6. The countries of the region operated under a common ideology in the past, but within bounds set by that ideology, exhibited significant differences in agricultural policy and farm organization. Each now faces a unique set of tasks and constraints during the transition. In order to draw lessons that transcend the particularities of the individual countries, we create in the following paragraphs a stylized country with the general features of each, but the particular uniqueness of none. We take the stylized country through an agricultural transition, indicating how the initial conditions affect the path of transition. We then turn to the actual countries of the region, and indicate how each in turn deviates from the stylized country, and explore the implications of their uniqueness for the agricultural transition.

7. Agricultural production in the stylized country is collectivized. Approximately one third of farms are state farms, and two thirds are collective farms (cooperatives), but there is in practice little difference between the two. State farms specialize in agricultural production. On these farms, workers are salaried employees of the state, and the state owns all farm assets, including land. Collective farms are also large, and have diversified processing and sideline activities in addition to agricultural production. Members of collective farms in theory hold title to their land, but ownership rights in the past were so attenuated as to be meaningless. On both state and collective farms, workers have a high degree of job and wage security, little responsibility for the financial performance of the farm, and little incentive to improve productivity. Both farms are protected from bankruptcy by a soft budget constraint.

8. Farm employees manage a household plot of about one half hectare in addition to their work on the large farm. In this small area they use inputs provided or purchased from the large farm plus family labor to produce food for their own use or for the market. The structure of production is thus dual, with very large units of 2,000 and 3,000 hectares plus many mini-farms of one half hectare. The private and socialist sectors are intimately linked in one agricultural system, and interact symbiotically. Each would face significantly higher costs of production if forced to function independently of the other. The large farms contract out some of the more labor intensive tasks, such as caring for very young animals, to the mini-farms. Private producers, in turn, depend on the large farms for inputs and services not available elsewhere since markets for them do not exist.

9. Agriculture employs 25 percent of the work force, and produces 20 percent of GNP. In developed market economies, agriculture is capital intensive and the share of agriculture in the labor force is smaller than its contribution to GNP. In our stylized country, agriculture is also capital intensive, but labor is less productive on average than in other sectors. This is in part because poor incentives and poor

organization reduce labor productivity, and in part because price distortions complicate measurement of agriculture's share in GNP.

10. Although agricultural labor is less productive than that in other sectors on average, agricultural wages are in rough parity with those of other sectors. When earnings from private plots are taken into account, agricultural incomes exceed those of other workers on average. High wages are sustained by relatively high purchase prices for agricultural products plus recurrent loans and grants to farms.

11. Yields of grains and field crops are not as high as in Western Europe, where farmers receive the support of the Common Agricultural Policy, but they equal yields of major commercial exporters in other parts of the world. Fertilizer use per hectare is lower than in Western Europe, but higher than in North America. Use of other agricultural chemicals is quite low, but poor storage and management practices have resulted in environmental damage and health problems even at low levels of application. Technical productivity in the livestock sector is lower than in crops. Lags in breeding and protein deficient feed rations reduce productivity. Milk yields per cow lag those of Western Europe by about one third. Use of labor, fertilizer, and feed grain is high per unit output, and agricultural costs of production are high and rising.

12. The stylized country is a middle income country, with per capita GNP of about $6,000 using the purchasing power parity methodology, and $2,500 using the exchange rate methodology. In recent years, the country has sustained aggregate consumption despite declining aggregate growth by borrowing heavily abroad. Agriculture's contribution to the growth in net foreign indebtedness has derived from increased demand for imported feed grains, and diversion of food from export markets to (subsidized) domestic consumption.

13. Per capita consumption of food is comparable to countries with income levels about one third higher. Caloric consumption is the same as that in market economies with higher levels of income, and consumption of meat exceeds that in more prosperous market economies. This consumption pattern is a result of food subsidies,

particularly for livestock products. Retail food prices have changed little in nominal terms for several decades, despite growth in nominal incomes. Real food prices (at official prices) have thus declined. Since markets do not clear at these official prices, the actual prices that people pay are higher than official prices. Consumers' expectations about what they should be able to purchase, however, are formed on the basis of official prices.

14. Despite growth in supply at high cost, excess demand has increased. As the gap between official prices and market clearing prices grows, the efficiency of retailing declines. Lines lengthen, and sales on legal and illegal alternative markets increase. Excess demand is fueled by macroeconomic imbalance. The monetary overhang increases as growth in wages exceeds growth in opportunities to consume and invest. The food subsidy is about five percent of GNP, and its fiscal burden contributes to macroeconomic imbalance. The degree of disequilibrium in food markets depends on separate factors affecting growth in demand and supply, and there is no mechanism to bring the supply and demand sides of the food economy into correspondence.

15. The most highly subsidized food items are meat and dairy products, and official prices for these products are approximately half the cost of delivery. Subsidization of items with low income elasticities is often considered to benefit poorer people, but the most highly subsidized items in the stylized economy are those with high income elasticities. The food price subsidy has delivered more benefits to the wealthier groups who consume more of the most highly subsidized products, and fewer benefits to poorer people.

16. Agroindustry is highly concentrated, and food processing, distribution, and input supply are managed by several large state monopolies. With pervasive excess demand for food, processors need have little regard for product definition and quality. Moreover, processing technology is outdated and technological constraints reduce the efficiency and quality of processing. Since retail prices have been

controlled, investment in better processing equipment could not be recovered on a commercial basis, and modernization of food processing was dependent on direct budgetary allocations. With the fiscal burden of the direct food subsidy rising, the agricultural sector did not compete successfully for additional budgetary funds to modernize processing. Moreover, food processing is considered light industry, and as such has not been given high priority.

The Transition

17. The agricultural sector of the stylized economy on the eve of the transition is thus characterized by:

(i) High costs of production (primarily fertilizer, labor, and feed)

(ii) High levels of food consumption relative to market economies of comparable prosperity

(iii) Subsidized food prices

(iv) Excess demand for food at those prices

(v) Macroeconomic imbalance, including budget deficit and foreign debt

(vi) Pervasive monopoly in food processing and distribution

18. The macroeconomic imbalance in our stylized country is substantial, and the transition is initiated by a program of stabilization. Fiscal outlays are reduced, the money supply tightened, and the overvalued currency devalued.

19. The macroeconomic stabilization affects the agricultural sector in several ways. The food subsidy is the most visible target for significant fiscal savings. Although food is not the only subsidized item, it is the largest one that appears directly in the budget. It is, moreover, at five percent of GNP roughly of the same order of magnitude as the budget deficit. Retention of the food subsidy is inconsistent with macroeconomic stabilization, and the subsidy is removed. It is replaced by a less expensive program of targeted assistance to vulnerable consumers.

20. Without the subsidy, meat prices approximately double, and food prices rise on average by 50 percent. Demand for food declines, but the fall in demand is moderated by the ability of wealthier consumers to draw savings out of the monetary overhang and maintain expenditures on food. All consumers, both rich and poor, shift expenditures from other areas to food, and demand for clothing and consumer durables falls. The price increase does not reduce caloric intake on average, but does induce shifts away from more expensive foods.

21. Processors note the fall in demand for their products. The price liberalization augments their discretion in setting prices, and they respond by raising prices of products with low price elasticities. There is a secondary rise in retail food prices as monopolistic processors respond to the fall in demand.

22. The price liberalization does not raise prices that producers receive. In an open market economy, devaluation will raise agricultural producers' prices, since most food and fiber is tradeable. The stylized economy is not fully open yet, and transmission of changes in world prices and exchange rates is weak. Moreover, producer prices in the past exceeded retail prices by the amount of the subsidy. The increase in retail prices removes the wedge that formerly divided them from producer prices without appreciably affecting farm level prices.

23. Most producers are in a monopsonistic relationship with processors, and this puts further downward pressure on producer prices. Producers are unable to push the former volume of production through markets at lower prices, since for products requiring processing, they cannot bypass the processing monopolies. Excess supply appears at the farm level. Some of this can be exported, and it is more competitive than in the past due to the devaluation. Institutional linkage between producers and international markets, however, is weak, and product definitions and quality are not conducive to quick switching between domestic and export markets. Producers face higher costs for fertilizer and imported animal feed, and the combination of higher costs and reduced demand puts pressure on farm income.

24. The crucial variables in determining the impact of macroeconomic stabilization on the agricultural sector are the relative magnitude of the food subsidy, the amount of excess demand for food ante-liberalization, and the degree of concentration in processing. If the food subsidy is small, if its removal approximately absorbs excess demand, and if processors have limited market power, the adjustment process will be less disruptive for producers. If, however, the shock to the demand side is large and the economy shifts abruptly from excess demand to excess supply, producers will face a substantial adjustment.

25. Macroeconomic stabilization brings a sudden response on the demand side, and usually occasions some reaction on the supply side. The longer term supply response, however, depends on processes separate from the instruments of stabilization. What is the nature of the needed supply response in the stylized economy? The term "supply response" in the context of socialist agricultural reform has become a short-hand reference to the increment in productivity and aggregate output observed in the Chinese experience. In China the agricultural reform generated increased demand for food as well as supply, since most of the population is still in the countryside, incomes rose most in the countryside, and per capita levels of consumption were very low prior to the reform.

26. In the case of our stylized country, food consumption ante-transition is higher than is sustainable in the short and intermediate run. The required supply response is thus a complex one. Producers must bring down costs of production and drop unprofitable operations. They must produce less food or food of higher quality that can enter export markets. To achieve this, farms must be restructured, redundant workers dismissed, and purchased inputs used more judiciously. Yet even more efficient farms will not be able to survive if processors do not pass their improved productivity on to consumers, and are unable to create processed food of export quality. Producers are thus hostage to the pace of change in the processing, marketing, and distribution of food and fiber. The hope of a quick improvement in

agriculture that will facilitate change in other sectors is illusory unless a concerted effort to increase competition and the technological performance of food processing and marketing brings early results.

27. Problems in food processing are apparent even prior to the transition, and many participants in the food economy have argued for increased investment to modernize food processing. The investment is sought both from domestic and external sources, and the goal of the investment is usually construction of new plants and purchase of more modern equipment.

28. The analysis above highlights the importance of food processing during the transition, but is not a reiteration of the traditional call for more investment. Unless price liberalization is well underway and changes in food demand are better understood, new investment in food processing is likely to respond to the wrong signals. It will be devoted to the wrong commodities, placed in the wrong locations, and purchase technology inappropriate for the post-transition factor costs. The focus of change in food processing in the early period of the transition should be deconcentration of existing plants, and introduction of competition where possible through expansion of small scale private transport and other means. Any new investment should promote competition rather than simply expand processing capacity.

29. If producers have poor access to markets because reorganization of processing and distribution is stalled, they will demand direct government subsidies to forestall declines in farm income. The government will be pressured to embark upon programs of price support that it can ill afford. Furthermore, the government's direct role in decisions about agricultural production will remain large, and regulations, rather than market signals, will shape emerging factor and product markets. The pace of change in agroprocessing will thus affect the nature of the reorganization of production at the farm level.

The Transition and Employment in Agriculture

30. Reorganizing the supply side to increase efficiency presents a different set of issues than reorganization to increase output. When unemployment in industry and mining is rising, it would be helpful if agriculture could absorb additional labor. In general absorption of additional labor is not consistent with the imperative for higher efficiency, since on many farms labor is redundant already. There are several ways, however, in which agricultural production can relieve the pressure of rising unemployment in other sectors.

a. Many people employed in agriculture are over age 55, and their productivity in activities requiring physical strength is low. As the children of these people lose jobs that recently attracted them to urban areas, many younger people with agricultural experience will be willing to return to agriculture. This tendency can be encouraged in the reassignment of property rights. People over age 55 can be given a share of land only if they show a commitment of a younger person to work the land on a long term contract. Otherwise older people could be given a monetary settlement in the redistribution.

b. As factor markets begin to function better, some rural areas that have become sparsely populated will attract reverse migration. This process can be encouraged in the reassignment of property rights.

c. The small individual farmsteads that emerge from the reassignment of property rights will initially be more labor intensive but more productive than the large units. These farms will be able to absorb family labor no longer employed in industry or mining. Even though the return to labor will be low, the opportunity cost will also be low as non-agricultural unemployment rises. Some of the additional family labor will be used for investment in construction and land improvement on the new farmsteads. If creation of smaller farms with better labor incentives (through leasing, decollectivization, and privatization) is stalled, agricultural production will not be able to absorb additional labor.

31. Adjustments in farm organization will allow farms overstaffed at the beginning of the transition to improve efficiency without contributing to aggregate unemployment. It is unlikely, though, that employment in agricultural production will increase with the transition. Rather, the transition will initiate a long period of slow outmigration from agricultural production. The pace will depend on the time required

for industry to begin to grow again and draw on the reserve of labor employed in agriculture.

32. More promising venues for growth in employment in rural areas in the long run are the underdeveloped service sector, housing, infrastructure and communications, and food processing. Judicious investment in these areas can increase employment, increase competition in agricultural marketing, and improve the efficiency of agricultural production. It is thus important that the policies of the agricultural transition be part of a comprehensive program of rural development.

Policies to Reduce the Costs of Adjustment

33. In summary, the agricultural transition in the stylized country proceeds in a context of macroeconomic stabilization that constrains demand for food. Aggregate growth declines or turns negative, and the relative price of food increases substantially. Producers have difficulty selling their products because monopolistic processors do not pass falling prices on to consumers. Farm incomes fall, and state and collective farms are unable to meet their financial obligations. Under pressure of bankruptcy they are reorganized to function either as genuine producer cooperatives smaller in size than the original state or collective farms, or as individual farmsteads.

34. These new farms create a new demand for rural services and private investment, and a constituency to advocate demonopolization of processing. The supply response is a complex and slow one, and it consists of more efficient production of primary products, changes in the commodity mix to reflect changes in demand under the new relative price structure, and improved processing and product definition.

35. At what points can intervention in the agricultural transition of the stylized country be most effective? The adjustment on the demand side as prices are liberalized can be eased through:

- Public education and public relations highlighting the benefits of price liberalization and the absolute necessity of the move.

- Design of programs of targeted assistance to moderate the impact of higher food prices.

- Carefully monitored commodity assistance to reduce retail prices in localities where prices are likely to overshoot longer run values during the period immediately after liberalization.

The adjustment on the supply side can be eased through:

- Promotion of greater competition in processing and input supply through privatization and restructuring of state owned enterprises, and sale of small trucks to producers and private traders.

- Investment in rural roads and communication to complement entry of the private sector into agricultural marketing and improve the performance functioning of the public sector. This can be part of a public works program.

- Investment in food processing, packaging, and marketing when the investment augments private sector development (but is not dedicated to a single private firm), and when the investment meets rigorous criteria consistent with estimates of factor costs and product prices relevant for the life of the project.

- Technical assistance to improve the performance of rural financial intermediaries.

- Technical assistance in assessing export opportunities, and certification of product quality for entry into particular markets.

From the Stylized to the Actual

37. Each of the actual countries of Eastern and Central Europe differs in important respects from the stylized country. The differences affect the course of the transition and the appropriate policy interventions. In all countries except Poland the agricultural transition is in the very early stages, and many lessons remain to be learned.

Poland

38. Retail food prices were liberalized in Poland in October, 1989, and household real income fell on average 30-40 percent in the following quarter. Consumers shifted expenditures, and food consumption fell by 10-15 percent (Polish-European Community-World Bank Task Force, 1990).

39. When inflation was high and its future course uncertain, producers withheld stocks from the market in order to increase inventories of real assets. As inflation subsided and producers increased marketing, excess supply augmented by food aid replaced shortage. Processors maintained consumer prices rather than allowing them to adjust to excess supply.

40. Land in Polish agriculture is largely privately owned. About 25 percent of land is held in large state farms and the remainder is in private holdings of 6 hectares or less. The large number of very small farms makes employment in Polish agriculture high, at 28 percent of the labor force, but many of these people are part-time farmers.

41. The supply response in Poland is largely dependent on increased competition in marketing of inputs and output. State farms will be restructured and/or privatized for greater officiency. More efficient private agriculture will emerge only slowly, as the small units are amalgamated. The pace of amalgamation will depend on creation of employment in rural non-farm activities, and the retirement of elderly private owners.

Czech and Slovak Federal Republic

42. Agriculture in the Czech and Slovak Federal Republic is collectivized, with about 65 percent of land in cooperatives or collective farms, and 30 percent in state farms. Agriculture employs only about 11 percent of the work force.

43. The Czech and Slovak Republic enters the transition without the large macro imbalance that characterizes many regional neighbors. Although food is subsidized, the government's budget is roughly balanced. Growth in supply (at high cost) has been adequate to prevent the large disequilibrium at subsidized prices that characterizes food markets in the more distorted economies. The smaller share of food and agriculture in Czechoslovakia's more developed economy reduces the aggregate burden of food subsidies. The absence of budgetary urgency felt in other countries plus the relative calm on retail food markets makes a gradual administered increase

in food prices an option. On July 9, 1990 food prices were raised on average 26 percent with limited lump sum compensation to workers.

44. Czech and Slovak producers face pressures from three sources. Since excess demand for food prior to the price increase was relatively small, excess supply is likely, and will increase with subsequent price increases. Its immediate manifestation may have been tempered in 1990 by severe drought. As the economy opens, West European producers will offer competition in the domestic market for high quality food, and East and Central European producers will offer price competition for products of lower quality. Czech and Slovak food processing is highly concentrated and technologically ill-equipped to compete with West European processors. Demands for trade barriers and artificial maintenance of agricultural incomes are likely to increase.

East Germany

45. Producers in the former GDR have been given a mixed blessing: benefits of the Common Agricultural Policy, and competition from producers who have had those benefits for many years. The exchange rate chosen for the currency unification exacerbated the difficulties of East German producers. Employment in agricultural production will fall by as much as one half by some estimates, even though agricultural wages are low relative to earnings in West Germany. The currency reform granted consumers immediate and direct access to products of the European food processing industry, and demand for East German produce processed locally has declined.

46. In the East German case the supply adjustment will be very large and will be driven by loss of protection, rather than decline in domestic demand for food.

Hungary

47. Hungary's partial success over the past three decades in releasing constraints imposed by socialized agriculture served growth in output. Although Hungary's external debt is large, the debt has accumulated despite, and not because

of, the agricultural trade balance, which is positive. The importance of agriculture in the trade balance paradoxically may constrain the transition: livestock products exported now with domestic subsidies may continue to be subsidized in order to earn hard currency needed for debt service.

48. Food prices in Hungary have been adjusted repeatedly over the past several decades, and markets are in approximate equilibrium. The current relative balance, however, still includes retail food subsidies, and their removal will increase the proportion of Hungarian food production available for export. Current levels of export augmented by additional supplies can be sustained only if costs of production at the farm level decline, primarily through increased productivity in the livestock sector, and if the performance of the processing industry improves. Major markets for Hungarian food are characterized by complex impediments to growth: the West European market by trade barriers, and the Soviet market by economic decline and political instability.

Romania

49. Romanian agriculture is collectivized, but the private sector contributes a larger share of total output than in other countries with collectivized agriculture. Basic historic data on production and consumption of food in Romania are unreliable. Given the estimated low level of per capita income and the current shock to the trade balance associated with higher energy prices and changes in CMEA trading rules, it is unlikely that demand for food will rise in the future. Food prices were scheduled to increase in January, 1991, and if the increase is implemented, it will further dampen demand for food.

50. The government of Romania has announced intentions to dismantle the large farms and return management and ownership to private farmers. If implemented, it will constitute the most unambiguous program of decollectivization initiated to date.

Yugoslavia

51. Yugoslavia has a large sector of private producers constrained by processing and distribution systems that favor the socialized sector. Average yields are low, reflecting the poor agroclimatic conditions and low factor productivity in the southern part of the country, and low levels of investment throughout.

52. Agricultural prices are subsidized, but Yugoslavia has not used direct regulation of retail prices as the mechanism of delivery. Consumers are accustomed to frequent movement in food prices, and markets are active. Food is subsidized at the processing level in order to shield consumers from relatively high producer prices. Products marketed directly by producers are not subsidized except if the producer has access to subsidized inputs.

53. Demand for food will fall during the Yugoslav stabilization program as control of the wage process brings real incomes down. An abrupt increase in the relative price of food is not likely in Yugoslavia, since retail food prices are not as distorted as in countries where control was more direct. Yugoslavia, along with the Soviet Union, faces the challenge of maintaining a national agricultural market in the face of a weakening national polity and rising barriers to trade between republics.

Bulgaria

54. Bulgaria corresponds most closely to the stylized country described above. Per capita consumption of food is high and highly subsidized through strictly controlled retail prices. Most agricultural workers are employed on very large collective farms where wages are high and productivity low. Agroprocessing is a concentrated state monopoly. Rising food subsidies have exacerbated the deteriorating macroeconomic balance. Bulgaria has traditionally been a net food exporter, but rising consumption and falling productivity have eroded the positive trade balance in recent years. The overall positive agricultural trade balance includes a large surplus with CMEA trading partners, particularly the USSR, and a deficit with hard currency trading partners.

USSR

55. The Soviet agricultural sector is the most distorted in the region, and the one with greatest potential for improvement. Retail price control has been extreme, and the food subsidy burden is approximately 12 percent of GDP. The deterioration of the marketing system under the weight of increasingly distorted prices is severe. The USSR is a major net food importer.

56. The Soviet agricultural transition has been stymied by sharp political disagreement over retail price liberalization and private ownership of land. The delay of price liberalization and weakened economic links between republics depreciate one of the most important assets of the Soviet agricultural economy; i.e., the interregional comparative advantage of its vast territories and agroclimatic diversity.

DILEMMAS: AGRICULTURAL FINANCE, LAND OWNERSHIP AND COMPETITION

57. Successful agricultural development is a complex process even where the needed changes are less monumental than in reforming socialist countries; rural poverty and low productivity persist in many parts of the world not handicapped by the legacy of socialist agriculture. Poor market economies in the developing world offer lessons useful for the transition in socialist economies (Braverman and Guasch (1990 a)). The magnitude and the context of the changes required in the socialist economies, however, raise a number of distinct dilemmas. We focus on three of these below.

Financial Reform and Agricultural Credit

58. Financial reform is central to the transition throughout the economy, and is already underway in most countries. State banks are being transformed into commercial banks and positive interest rates introduced. Two questions arise with regard to coordination between the agricultural transition and the financial reform:

i. How should agricultural credit be managed prior to completion of the financial reform?

ii. Will new financial markets serve agriculture adequately, or will special programs be needed even after the transition?

59. Creation of new financial institutions with a cadre of trained staff will take time. Special programs administered by the remnants of the old agricultural banks are likely to direct funds as poorly as they did in the past. Producers and processors facing positive real interest rates and genuine commitments to repay will reassess their needs for credit. The danger of misdirecting funds when their opportunity cost is very high, plus the novelty of positive real interest rates suggest that during the transition both the supply of and demand for agricultural credit should contract severely.

60. Contraction of agricultural credit is prudent and appropriate, but an allocative mechanism is as needed during contraction as during expansion. Producers denied credit for current inputs, such as fertilizer and feed, will use less of each, and will draw down liquid assets; i.e., livestock herds. Contraction of short term credit could thus augment supply of marketed meat just as demand is falling. Some long term credit may complement land reform and price liberalization, through modest investments to equip private farms and redirect processed products from domestic to export markets.

61. If agricultural credit contracts severely until a completed financial reform yields institutions that can mobilize savings and efficiently channel them, the danger that credit will be misdirected and wasted will be low. The costs of a credit-constrained agricultural transition, however, will be high in rural unemployment and poverty, disruption of production, and liquidation of assets. A costly transition is one more likely to be interrupted or reversed politically. The dangers of maintaining an administered flow of agricultural credit without adequate criteria for its direction are evident. A course intermediate between the two dangers would appear to call for a carefully monitored program of directed credit with the explicit goal of reducing

costs of the agricultural transition while maintaining consistency with the overall financial reform. This is clearly an area in which external technical assistance will be of value.

62. There is a high probability that programs intended to improve access to credit during the transition will become a permanent feature of agricultural policy. Subsidized credit has been used in many countries to overcome actual or perceived failures in financial markets and discrimination against agriculture (Calomiris, 1991). The record on these programs of subsidized credit and the institutions created to deliver it in developing countries is poor (Braverman and Guasch (1991), Chhibber, 1989). If subsidized credit becomes a feature of the agricultural policy of the transition (as it has already in Poland (Rembisz and Rosati, 1991)), attention to the mode of delivery and targeting will be important.

Property Rights and Privatization: Should Land Be Given or Sold?

63. Privatization of assets owned by the state is proceeding in parallel with debate about the objectives, benefits, and methods of privatization. Large scale privatization raises special issues for the agricultural sector, particularly with regard to land. The redefinition and redistribution of property rights in land will affect producers' incentives to manage land efficiently and to invest in its future productivity (see Feder, G. 1991; Migot-Adholla, A., 1991). Agriculture's contribution to future growth will thus be affected by decisions made now with regard to property rights in land.

64. Throughout much of Eastern Europe, with the notable exception of the Soviet Union, the state owns little agricultural land. During collectivization in Eastern Europe, households surrendered management of the land to collectives, but often retained property rights. When property rights were transferred, it was in many cases under duress, and to the collective, rather than to the state.

65. Land reform thus entails adjudicating competing claims, compensating, and transferring management of land to more efficient production units. Under rare

circumstances this can mean simply returning land to an agricultural household that lost it during collectivization, wants it back, and has experienced prime age agricultural workers. Usually the transfer is more complicated.

66. The approach to property rights in land must be consistent with the privatization strategy more generally. Privatization of industrial enterprises raises difficult issues of how to value assets, to whom to transfer them, and on what terms (Vickers and Yarrow, 1990; Blanchard, et. al., 1990). One approach now being implemented in Poland and considered in other countries where rapid extensive privatization is sought, is to give shares in large public enterprises to several holding companies or mutual funds, and disperse ownership of the holding companies among the general public. There is no need to value the enterprises, since they will not be sold. Over time the shares in the holding companies will be valued through market transactions as capital markets develop. This approach achieves the concentration in control necessary for good management, but democratically dispersed ownership consistent with elementary standards of fairness. All citizens, regardless of their place of employment, share in the distribution of ownership.

67. This approach is very promising for large industrial enterprises, but will not work for large farms. Special characteristics of agricultural production argue for special treatment of land. Agriculture's link with biological processes, time lags, and dependence on variable nature place a premium on close management. The manager who most carefully husbands the owner's assets is usually the owner him or herself, although good management can be achieved through contracts that invite the manager to adopt the owners' interests. Widely dispersed share ownership of farms in which owners have little direct contact with management is rarely observed if the owners' objective is current income, rather than speculative gains. The rarity of dispersed ownership of farms in market economies contrasts to the frequency with which industrial firms are so held.

68. If farms should not be owned by absentee shareholders, then neither large state nor large collective farms should be included in the portfolios of holding companies. Ownership (or an equivalent long term marketable leasehold) should pass to individuals or cooperatives who will manage the land. The transfer of (redefined) property rights is not from the state to the citizenry; it is from one person or group to another. If those who receive land also receive shares of holding companies, fairness would seem to require that they pay for the land. The problem of valuation is thus more difficult to side-step in agriculture, and the problem of finance is just one step behind that of valuation. One solution would be to have recipients of land pay rent for a specified number of years. The rent would be used to compensate claims of former title holders, and after the chosen period, both the rental payments and compensation would terminate, and full title would be granted to the new holder.

69. If large public industrial enterprises are privatized by granting shares to employees through piecemeal or spontaneous privatization, or some other approach that de facto excludes agricultural workers from sharing in the new distribution of private industrial wealth, then the argument that farmers should pay for land is weaker. A simple division of assets among employees would probably be less destructive in agriculture than in the rest of the economy, but the social tension and economic damage that such a distribution would bequeath would eventually harm agriculture, as well.

Competition and Agroindustry

70. Technological considerations argue in favor of rapid restructuring and sale of farms. The new owners might choose to manage their lands jointly, and the restructured farm might look from the road much like its predecessor, but managerial and financial responsibilities would be quite different. When the large farms include processing and distribution enterprises, these can be divested during the restructuring, and the land reform can contribute to growth of competition in marketing. Privatization of free-standing processing units either through auction,

leasing, or distributing shares to holding companies can further enhance competition, as can the sale of trucks owned by state enterprises and the military.

71. These steps can erode the power of processing monopolies, but they are unlikely to dismantle it. A credible threat of foreign entry can induce monopolists to behave more competitively even before their power is dispersed through entry of new domestic firms, and a convertible exchange rate is a precondition for this. An extreme example of this pressure was seen in the former GDR, when the currency union swept East German consumers into the European Community's well stocked larder. East German processors were, in the short run, unable to retain their market by cutting prices and increasing volume. They may rebuild some of their share in the longer run, as they modify their products, and as East German consumers with declining incomes return to lower priced foods. In order to have the desired impact on monopoly, however, the threat of foreign competition must be credible, but the actual flows of foreign products not overwhelming.

CONCLUSION

72. Management of the agricultural transition in Eastern and Central Europe will affect the political sustainability of the process and will influence agriculture's contribution to the growth of emergent market economies. Important as agriculture is, from Poland in the north down to Yugoslavia and Bulgaria in the south, its impact on the countries, the region, and the world is dwarfed by the agriculture of the USSR. A positive program to arrest the decline in Soviet agriculture has the potential to contribute to economic growth and political stability in the region and in the world. Failure to address the fundamental flaws in Soviet agriculture will hasten the country's decline into poverty and ethnic turmoil, and reduce the likelihood that the monumental efforts of Central Europeans will be successful.

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Per Capita Average Food Consumption, 1985
Kilograms Annually

Country	1984-86 Calorie Per Day	1984-86 Protein Gram/Day	Meat	Fish	Milk 1/	Eggs b/	Potato	Vegetable Oil c/	Sugar d/	Grain and Bread
USA	3,642	106.5	118	7	129	15	20	11	30	85
Japan	2,858	88.0	38	37	38	15	14	12	21	108
Austria	3,416	96.6	90	5	142	14	62	15	37	68
Denmark	3,512	94.9	83	46	146	16	64	14	35	71
Finland	3,080	95.6	68	16	182	11	68	6	37	73
France	3,273	111.3	106	18	84	16	76	12	34	80
FR Germany	3,476	101.0	100	6	112	17	78	5	37	74
Ireland	3,692	105.5	97	11	289	14	126	11	41	92
Norway	3,219	101.2	51	29	203	12	80	n.a	38	71
Portugal	3,134	90.5	52	40	43	6	93	12	29	106
Spain	3,365	96.5	75	25	102	17	111	25	33	77
United kingdom	3,218	88.0	74	15	141	14	110	12	37	83
Yugoslavia*	3,542	101.5	64	3	97	8	50	n.a	34	114
1985										
Bulgaria	3,634	108.3	77	8	250 e/	10	33	16	35	144
Czechoslovakia	3,473	103.3	86	5	239	14	78	8	35	111
GDR	3,800	112.7	96	8	-	12	143	2	40	99
Hungary	3,641	101.7	77	2	175	13	54	5	35	110
Poland	3,298	101.8	67	8	403	9	143	3	41	118
Romania	3,358	104.3	60	n.a	-	12	-	n.a	26	143
Yugoslavia*	3,542	101.5	55	3	-	7	51	13	35	175
USSR	3,394	105.6	62	18	295	10	104	10	42	133

Source: FAO Production 1987, pp.291, 293. Food and Agriculture Organization of the United Nations, 1988.

Food Consumption Statistics 1978-85, OECD, Paris, 1988.

COMECON Data 1988. Wiener Institute fur Internationale Wirtschaftsvergleiche, 1989, pp.157-163.

a/ For OECD countries, excludes processed dairy products. For CMEA countries, includes milk equivalent of all dairy products.
b/ For CMEA prices converted to weight at four kilograms/100 eggs.
c/ For OECD countries, excludes margarine. For CMEA, includes all vegetable oil and derivative products.
d/ Excludes other sweeteners, and syrups.

* Yugoslavia is included in both OECD and CMEA to indicate comparability of reporting for the two groups.

1985-88 Average Yields: (MT/HA, MT/COW)

Country	Barley	Milk	Maize	Potatoes	Rye	Sugar Beet	Wheat
Bulgaria	3.544	3.386	3.745	10.473	1.718	17.636	3.638
Czechoslovakia	4.336	3.843	5.273	18.942	3.556	35.854	4.936
GDR	4.700	4.312	4.338	25.241	3.398	31.196	5.282
Hungary	3.886	4.803	6.071	18.221	2.116	37.435	4.765
Poland	3.252	3.098	4.770	18.555	2.492	33.632	3.584
Romania *	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Soviet Union	1.700	2.395	3.256	11.799	1.773	25.029	1.747
Yugoslavia	2.611	1.750	4.199	8.294	1.771	38.813	3.726
Austria	4.289	3.804	8.237	27.954	3.728	54.471	4.780
Canada	2.722	5.444	6.160	25.860	1.539	39.027	1.782
Denmark	4.911	4.793	6.897	35.339	4.151	50.824	6.293
France	5.104	3.603	6.753	34.187	3.345	61.123	5.790
Greece	2.296	1.890	9.696	17.465	2.085	61.320	2.387
USA	2.596	6.159	6.926	33.020	1.749	46.539	2.415

Source: FAO Production Yearbook, 1989.

* Revised Romanian data for 1985-88 are not yet available.

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